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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/717,363

11/19/2003

Robert Fischer

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7590

11/21/2006

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EXAMINER

SAFAIPOUR, BOBBAK

ART UNIT

PAPER NUMBER

2618

DATE MAILED: 11/21/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

**Office Action Summary**

Application No.

10/717,363

Applicant(s)

FISCHER ET AL.

Examiner

Bobbak Safaipoor

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 01 September 2006.
- 2a) ☒ This action is **FINAL**. 2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-13 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some \* c) ☐ None of:
- 1) ☒ Certified copies of the priority documents have been received.
  - 2) ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
  - 3) ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### **DETAILED ACTION**

1. This Action is in response to Applicant's response filed on September 1, 2006. **Claims 1-13** are still pending in the present application. **This action is made FINAL.**

#### *Claim Objections*

2. On line 1 of claim 11, replace "receiver" with --motor vehicle-- after "The";  
On line 1 of claim 12, replace "receiver" with --motor vehicle-- after "The";  
On line 1 of claim 13, replace "receiver" with --motor vehicle-- after "The";  
Appropriate correction is required.

#### *Claim Rejections - 35 USC § 103*

2. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.
3. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

4. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

5. **Claims 1-4, 6-7, 9-11, and 13** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rotzoll (U.S. Patent # 5,790,946)** in view of **Desai et al (U.S. Patent Application Publication #2002/0149477 A1)**.

Consider **claim 1**, Rotzoll clearly discloses a method for receiving different wake-up signals (read as first signals and further signals, i.e. WAKE\_UP1, WAKE\_UP2, and WAKE\_UPX, figure 4), the wake-up signals differing in the transmission parameters: frequency, data rate, and modulation type (figure 4; column 1 line 65 - column 2 line 6, and column 5 lines 43-64) and comprising the steps of:

a) In a first step in a sleep mode (read as quiescent mode) of the master receiver 25 (read as receiver) (figure 1), detection (receiving and searching) for a predetermined frequency, data rate and/or modulation type, (wake-up criterion) is performed (column 1 line 65 - column 2 line 6,

column 4 line 65 - column 5 line 20), and using a first preset adjustable configuration of transmission parameters (i.e., MODE 1, MODE 2, MODE X); and

b) By employing, for example, more than one data rate detector the wake up receiver 20 can switch the data rate to be detected from the wake up signal. When a change is necessary (read as no signal is received and no wake-up criterion is found) switch the receiver to "Mode X" (at least one further configuration) and detect a different data rate (read as wake-up criterion) using a different data rate detector (figures 1, 3 and 4; column 5 lines 11-14, and 40-50).

Rotzoll fails to disclose in a first step in a quiescent mode, when a wake-up criterion is found, sending a wake-up signal to at least a first device for switching said first device into active mode. Furthermore, Rotzoll fails to disclose when a wake-up criterion is found in said further configuration, sending a wake-up signal to at least a second device for switching said second device into active mode.

However, Desai et al disclose as known in the art a combined tire pressure monitoring and keyless entry receiver wherein the frequency shift keyed (FSK) transmission is specifically suited for use with the sensor assembly disposed within the tire and the amplitude shift keyed (ASK) is suited for use with the remote keyless entry system (paragraph 5). The remote keyless entry system includes a receiver to receive transmission from the key fob and actuate vehicle systems in response to transmissions received from the key fob and actuate vehicle systems in response to transmissions received from the key fob (paragraph 4) (read as when a wake-up criterion is found, sending a wake-up signal to at least a first device for switching said first device into active mode). The ASK receiver is engaged while the motor vehicle is stopped or parked. The ASK receiver is engaged in response to the speed of the motor vehicle being below

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a predetermined speed of 10 mph. Above 10 mph, the receiver assembly will change over to the FSK receiver which will receive transmissions from the sensor assemblies. The switch over allows the receiver assembly to accept data indicative of tire conditions from the sensor assemblies. (paragraphs 64-65) (read as when a wake-up criterion is found in said further configuration, sending a wake-up signal to at least a second device for switching said second device into an active mode).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Desai et al into the system of Rotzoll in order to have a receiver assembly comprised of both ASK and FSK receivers for receiving transmissions from sensor assemblies mounted in the tires and from a remote keyless entry system.

Consider **claim 6**, Rotzoll clearly discloses in figure 4, a receiver for receiving multiple wake-up signals (read as first and further signals i.e. WAKE\_UP1, WAKE\_UP2, and WAKE\_UPX, figure 4) comprising a storage device for loading at least two different pre-defined receiver configurations inherently taught by stating that the wake-up signal comprises a predetermined (implying storage of the values) frequency and a predetermined data rate (column 1 line 58 - column 2 line 6) wherein,

a) the master receiver (read as receiver) has a sleep mode (read as quiescent mode) in which it intermittently receives a signal and compares it to a predetermined frequency and data rate (read as wake-up criterion) (column 1 line 65 - column 2 line 6) using a first preset adjustable configuration of transmission parameters (column 4 line 65 - column 5 line 20), and

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b) the master receiver inherently comprises a logic switch (read as changeover switch) (figure 4), to select (read as switch) one of the other modes (MODE 1, 2, X) (read as configurations), when no signal is detected and no frequency and/or data rate (wake-up criterion) is found, and to search for a different data rate (wake-up criterion) (column 4 line 65 - column 5 line 20 and column 5 lines 43-64).

Rotzoll fails to disclose in a first step in a quiescent mode, when a wake-up criterion is found, sending a wake-up signal to at least a first device for switching said first device into active mode. Furthermore, Rotzoll fails to disclose when a wake-up criterion is found in said further configuration, sending a wake-up signal to at least a second device for switching said second device into active mode.

However, Desai et al disclose as known in the art a combined tire pressure monitoring and keyless entry receiver wherein the frequency shift keyed (FSK) transmission is specifically suited for use with the sensor assembly disposed within the tire and the amplitude shift keyed (ASK) is suited for use with the remote keyless entry system (paragraph 5). The remote keyless entry system includes a receiver to receive transmission from the key fob and actuate vehicle systems in response to transmissions received from the key fob and actuate vehicle systems in response to transmissions received from the key fob (paragraph 4) (read as when a wake-up criterion is found, sending a wake-up signal to at least a first device for switching said first device into active mode). The ASK receiver is engaged while the motor vehicle is stopped or parked. The ASK receiver is engaged in response to the speed of the motor vehicle being below a predetermined speed of 10 mph. Above 10 mph, the receiver assembly will change over to the FSK receiver which will receive transmissions from the sensor assemblies. The switch over

allows the receiver assembly to accept data indicative of tire conditions from the sensor assemblies. (paragraphs 64-65) (read as when a wake-up criterion is found in said further configuration, sending a wake-up signal to at least a second device for switching said second device into an active mode).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Desai et al into the system of Rotzoll in order to have a receiver assembly comprised of both ASK and FSK receivers for receiving transmissions from sensor assemblies mounted in the tires and from a remote keyless entry system.

Consider **claim 10**, Rotzoll clearly discloses in figure 4, a receiver for receiving multiple wake-up signals (read as first and further signals i.e. WAKE\_UP1, WAKE\_UP2, and WAKE\_UPX, figure 4) comprising a storage device for loading at least two different pre-defined receiver configurations inherently taught by stating that the wake-up signal comprises a predetermined (implying storage of the values) frequency and a predetermined data rate (column 1 line 58 - column 2 line 6) wherein,

the master receiver (read as receiver) has a sleep mode (read as is operable to operate in a quiescent mode) in which it intermittently receives a signal and compares it to a predetermined frequency and data rate(read as wake-up criterion) (column 1 line 65 - column 2 line 6) using a first preset adjustable configuration of transmission parameters (column 4 line 65 - column 5 line 20), and the master receiver inherently comprises a logic switch (read as changeover switch) (figure 4), to select (read as switch) one of the other modes (MODE 1, 2, X) (read as configurations), when no signal is detected and no frequency and/or data rate (wake-up criterion)



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is found, and to search for a different data rate (wake-up criterion) (column 4 line 65 - column 5 line 20 and column 5 lines 43-64).

Rotzoll fails to disclose a first device coupled with said receiver and a second device coupled with said receiver. Rotzoll also fails to disclose in a first step in a quiescent mode, when a wake-up criterion is found, sending a wake-up signal to at least a first device for switching said first device into active mode. Furthermore, Rotzoll fails to disclose when a wake-up criterion is found in said further configuration, sending a wake-up signal to at least a second device for switching said second device into active mode.

However, Desai et al disclose as known in the art a combined tire pressure monitoring and keyless entry receiver wherein a first device is couple with said receiver (read as remote keyless entry system) and a second device is coupled with said receiver (read as tire pressure monitoring system) (fig 1, paragraphs 6, 7, 33 and 34).

Desai et al further disclose the frequency shift keyed (FSK) transmission is specifically suited for use with the sensor assembly disposed within the tire and the amplitude shift keyed (ASK) is suited for use with the remote keyless entry system (paragraph 5). The remote keyless entry system includes a receiver to receive transmission from the key fob and actuate vehicle systems in response to transmissions received from the key fob and actuate vehicle systems in response to transmissions received from the key fob (paragraph 4) (read as when a wake-up criterion is found, sending a wake-up signal to at least a first device for switching said first device into active mode). The ASK receiver is engaged while the motor vehicle is stopped or parked. The ASK receiver is engaged in response to the speed of the motor vehicle being below a predetermined speed of 10 mph. Above 10 mph, the receiver assembly will change over to the

FSK receiver which will receive transmissions from the sensor assemblies. The switch over allows the receiver assembly to accept data indicative of tire conditions from the sensor assemblies. (paragraphs 64-65) (read as when a wake-up criterion is found in said further configuration, sending a wake-up signal to at least a second device for switching said second device into an active mode).

Therefore, it would have been obvious to one of ordinary skill in the art to incorporate the teachings of Desai et al into the system of Rotzoll in order to have a receiver assembly comprised of both ASK and FSK receivers for receiving transmissions from sensor assemblies mounted in the tires and from a remote keyless entry system.

Consider **claim 2**, and **as applies to claim 1 above**, Rotzoll, as modified by Desai et al, further discloses when a change in necessary (read as no signal is received and no wake-up criterion is found) switch to "Mode X" (at least one further configuration) and detect a different data rate (read as wake-up criterion) using a different data rate detector (wake-up criterion) to be detected from the wake up signal as in step a) (figures 1, 3 and 4; column 5 lines 11-14 and 40-50).

Consider **claim 3**, **as applied to claim to 1**, Rotzoll, as modified by Desai et al, clearly discloses that the first device is a remote keyless entry system and said second device is a tire pressure monitoring system (Desai et al: paragraphs 6-7).

Consider **claim 4**, and **as applies to claim 1 above**, Rotzoll, as modified by Desai et al, further discloses a switch 30 for switching the master receiver 25 between its modes of operation in response to the arrival of a wake up signal. Upon detecting the "WAKE\_UP1, 2, X"

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(receiving successfully and finding a wake-up criterion), a mode change signal is generated to switch 30. Accordingly, switch 30 changes the mode of operation of master receiver 25 from sleep mode to active mode (receiver goes out of the quiescent mode into an active mode) (figure 1; column 2 line 66 - column 3 line 1, column 3 lines 4-6 and 32-34).

Consider **claim 7**, as **applied to claim 6**, Rotzoll, as modified by Desai et al, clearly discloses that the master receiver goes into active mode or is awakened when detection (reception) is successful and a predetermined data rate (wake-up criterion) has been found by a) or b), using a mode (configuration) that was successful (figure 4; column 2 lines 2 – 6, column 4 lines 60-64 and column 5 lines 4-15 and 40-50).

Consider **claim 9**, as **applied to claim to 6**, Rotzoll, as modified by Desai et al, clearly discloses that the first device is a remote keyless entry system and said second device is a tire pressure monitoring system (Desai et al: paragraphs 6-7).

Consider **claim 11**, and as **applies to claim 10 above**, Rotzoll, as modified by Desai et al, further discloses a switch 30 for switching the master receiver 25 between its modes of operation in response to the arrival of a wake up signal. Upon detecting the “WAKE\_UP1, 2, X”, a mode change signal is generated to switch 30. Accordingly, switch 30 changes the mode of operation of master receiver 25 from sleep mode to active mode (read as the receiver has an active mode that the receiver goes into when reception is successful and a wake-up criterion has been found using the configuration that was successful for the reception occurred) (figure 1; column 2 line 66 - column 3 line 1, column 3 lines 4-6 and 32-34).

Consider **claim 13, as applied to claim 10**, Rotzoll, as modified by Desai et al, clearly discloses that the first device is a remote keyless entry system and said second device is a tire pressure monitoring system (Desai et al: paragraphs 6-7).

6. **Claims 5, 8, and 12** are rejected under 35 U.S.C. 103(a) as being unpatentable over **Rotzoll (U.S. Patent # 5,790,946)** in view of **Desai et al (U.S. Patent Application Publication #2002/0149477 A1)** in further view of **Uber et al (US Patent #4,633,515)**.

Consider **claim 5, and as applied to claim 1 above**, Rotzoll, as modified by Desai et al, clearly discloses the claimed invention except for mentioning that receiving and detection of a wake up criterion must take place within a preset time.

In the same field of endeavor, Uber et al. clearly show and disclose an emergency broadcast alert detector having a radio receiver (reads as wake up receiver), this radio receiver (reads as wake up receiver) has the ability to scan among several predetermined frequencies. The radio receiver (reads as wake up receiver) has the task of scanning through the predetermined frequencies and finds an emergency broadcast alert. A noise detector is connected to the output of the radio receiver (reads as wake up receiver), and if the noise detected is indicative of no signal is present, the radio receiver (reads as wake up receiver) will continue to scan through the predetermined frequencies. Uber et al. clearly discloses upon detecting noise indicative of no signal is present for a preset time, the radio receiver (reads as wake up receiver) switch to the next predetermined frequency. In other words, if no signal is detected (reads as successfully detecting a wake-up criterion) within a preset time, the radio

receiver (reads as wake up receiver) switch to a different predetermined frequency (figure 1; abstract; column 3 line 58 – column 4 line 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the timing scheme taught by Uber et al. into the system of Rotzoll and Desai et al, such that when the communication device, as described by Rotzoll, did not receive a wake up signal and can not detect any wake up criterion within a preset time, it switch to another mode (Rotzoll, figure 4) and try to receive the wake up signal and detect the wake up criterion, for the purpose of further reducing current draw.

Consider **claim 8**, and as **applied to claim 6**, Rotzoll, as modified by Desai et al, clearly discloses when a change is necessary, a second, third... detection mode can be selected to detect the data rate; but fails to disclose the use of a time control unit in conjunction with a timing convention to determine when a change of detection mode is necessary.

In the same field of endeavor, Uber et al. clearly discloses an emergency broadcast alert detector having a radio receiver (reads as wake up receiver). Where the radio receiver (reads as wake up receiver) scans through multiple frequencies to look for an emergency broadcast (reads as wake up signal). They disclose the use of a 3.5 seconds oscillator in conjunction with a noise detector and a NAND-gate to switch one frequency to the next (abstract; figure 1; column 3 line 53 - column 4 line 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the timing control unit of Uber et al. into Rotzoll and Desai et al for the purpose of using a timing convention in conjunction with a time control unit to wait for successfully receiving a wake up signal and detecting a wake up criterion before changing to

another mode that is both simple to design and easy to implement; thus reducing the cost of manufacturing the device.

Consider **claim 12**, and **as applied to claim 10 above**, Rotzoll, as modified by Desai et al, disclose the claimed invention except for wherein the receiver has a time-control unit so that the switchover using the changeover switch occurs within a preset time at the latest.

In the same field of endeavor, Uber et al. clearly discloses an emergency broadcast alert detector having a radio receiver (reads as wake up receiver). Where the radio receiver (reads as wake up receiver) scans through multiple frequencies to look for an emergency broadcast (reads as wake up signal). They disclose the use of a 3.5 seconds oscillator in conjunction with a noise detector and a NAND-gate to switch one frequency to the next (abstract; figure 1; column 3 line 53 - column 4 line 4).

It would have been obvious to a person of ordinary skill in the art at the time the invention was made to incorporate the timing control unit of Uber et al. into Rotzoll and Desai et al for the purpose of using a timing convention in conjunction with a time control unit to wait for successfully receiving a wake up signal and detecting a wake up criterion before changing to another mode that is both simple to design and easy to implement; thus reducing the cost of manufacturing the device.

#### ***Response to Arguments***

7. Applicant's arguments with respect to claims 1-8 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

8. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.

9. Any response to this Office Action should be **faxed to (571) 273-8300 or mailed to:**

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Alexandria, VA 22313-1450

**Hand-delivered responses** should be brought to

Customer Service Window  
Randolph Building  
401 Dulany Street  
Alexandria, VA 22314

Any inquiry concerning this communication or earlier communications from the

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Examiner should be directed to Bobbak Safaipour whose telephone number is (571) 270-1092.

The Examiner can normally be reached on Monday-Friday from 9:00am to 5:00pm.

If attempts to reach the Examiner by telephone are unsuccessful, the Examiner's supervisor, Edan Orgad can be reached on (571) 272-7884. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/customer service whose telephone number is (571) 272-2600.

*Bobbak Safaipour*  
B.S./bs

November 2, 2006

EDAN ORGAD  
PATENT EXAMINER/TELECOMM.

*Edan Orgad* 11/13/06